

REMARKS

Claims 1-2 and 5 are all the claims pending in the application.

Claim Rejections - 35 U.S.C. § 103(a)

1. Claims 1, 2 and 5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kishioka (US 2002/0098352 A1) in view of [Hitoshi] Takahira et al (EP 0930322A2) (hereinafter EP '322).

2. Claims 1, 2, 5 and 6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Okabe et al (Abstract of JP 07-105781) in view of Kishioka (US 2002/0098352A1) and EP '322.

Applicants traverse the rejections.

The present invention is directed to a double-sided PSA sheet having the following features:

- (1). at least two PSA layers;
- (2). no substrate;
- (3). optical isotropy;
- (4). thickness of not more than 50 μm ;
- (5). PSA layer in the touch panel side having a 180°-peeling adhesive strength (to a norbornene based resin film at a peeling rate of 300 mm/min at 23°C) of 5.5 N/20 mm or more;
- (6). PSA layer in the display device side having a 180°-peeling adhesive strength (to a glass plate or a triacetyl cellulose film at a peeling rate of 300 mm/min at 23°C) of not more than 5.0 N/20 mm

(7). the double-sided pressure-sensitive adhesive sheet is repeatedly peelable from the display surface of the display device together with the touch panel;

(8). each PSA layer comprises an acrylic polymer containing (meth)acrylic acid alkyl ester in which the alkyl moiety has from 1 to 18 carbon atoms selected from the monomers recited in claim 1;

(9). the major monomer for the respective PSA layers is constituted from the same kind of monomer; and

(10). the major monomer component constituting each PSA layer is 80% by weight or more based on the whole amount of the monomer components.

The combination of features (5) and (6) is not taught or suggested by any of the cited references. The Examiner merely states that these features are believed to be present in the double-sided PSA tapes of Kishioka as modified by EP '322. However neither of these references teaches or even mentions the adhesive strength of a PSA layer in the touch panel side and the adhesive strength of a PSA layer in the display device side. Further, neither of these references teaches or suggests the relationship of the different adhesive strengths of the PSA layer on the touch panel side and the PSA layer on the display panel side, wherein the adhesive strength of the PSA layer on the touch panel side is higher than the peeling strength of the PSA layer of the display side, i.e., 5.5 N/20 mm or more vs. not more than 5.0 mm, respectively. For at least this reason, the cited references do not teach or suggest the claimed invention, whether taken alone or in combination.

Additionally, these features of the present invention are significant. The specification of the present application teaches that when the PSA layer on the touch panel side and the PSA on

the display device side have the claimed adhesive strengths, “after sticking and fixing the touch panel to the display surface of the display device via the double-sided pressure-sensitive adhesive sheet, in peeling the touch panel from the display surface of the display device and further resticking it to the display surface of the display device, the double-sided pressure-sensitive adhesive sheet can be easily peeled away from the display surface of the display device together with the touch panel without generation anomalies such as cracks on the surface of a transparent conductive member constructing the touch panel. Moreover, rough pressure-sensitive adhesive coat of the surface of the pressure-sensitive adhesive layer in the display device side is suppressed or prevented, and the construction of the double-sided pressure-sensitive adhesive sheet and the touch panel, which has been once peeled away, can be stuck to the display surface of the display device without mingling of bubbles into the interface between the pressure-sensitive adhesive layer in the display device side and the display surface of the display device”. Thus, the element of the peeling adhesive strength has technical significance in the present invention and the cited references fail to recognize the advantageous effects of the present invention.

Further, Comparative Example 3 of the present specification shows that when both the 180° peeling adhesive strengths to the pressure-sensitive adhesive layer in the display device side and to the pressure-sensitive adhesive layer in the touch panel side are larger than 5.0 N/20 mm, the double-sided pressure-sensitive adhesive sheet is low in reworkability and forms cracks during peeling. Thus, the data in the specification indicates the criticality of these features of the claimed invention.

Neither Kishioka nor EP '322 teaches or suggests the feature of the present invention in which the adhesive strengths of both surface layers of the double-sided pressure-sensitive adhesive sheet are specifically selected to enable repeat peeling of the double-sided pressure-sensitive adhesive sheet from the display surface of the display device together with the touch panel. Further, there is no apparent reason for one of ordinary skill in the art to modify or combine the references and arrive at the claimed invention wherein the adhesive strengths of each of the PSA layers at the touch panel side and the display device are different and are specifically selected to enable repeat peeling of the double-sided pressure-sensitive sheet of the invention.

The Examiner's position that these features are believed to be present in the double-sided PSA tapes of Kishioka as modified by EP '322 is based on the assertion that the PSA tapes of Kishioka as modified by EP '322 are structurally and compositionally equivalent. However, Applicants submit that the Examiner is not correct in this regard.

First, the thickness of the total double-sided PSA sheet of the claimed invention is not more than 50 μ m. Kishioka teaches the thickness of the PSA layer in the range of from 5 to 500 μ m and more preferably in the range of from about 10 to 100 μ m. Kishioka does not specifically teach the total thickness of a double-sided PSA sheet having at least two PSA layers. There are thousands of possible combinations of the thicknesses of the two PSA layers and there is no apparent reason to choose two or more PSA layers, each having a thickness within the very broad range taught by Kishioka, such that the total thickness would be within the claimed range of not more than 50 μ m.

EP '322 also teaches the thickness of the PSA layer and fails to teach or suggest the total thickness of a double-sided PSA sheet having at least two PSA layers. EP '322 teaches that the PSA layer has a thickness of from 10 to 100 μm . There are thousands of possible combinations of the thicknesses of two PSA layers having a thickness within the range taught by EP '322 and there is no apparent reason to choose two or more PSA layers, each having a thickness within the range taught by EP '322, such that the total thickness would be within the claimed range of not more than 50 μm .

The total thickness of not more than 50 μm leads to excellent optical characteristics as can be seen from Examples 1 and 2 in Table 1 of the specification. Thus, even if Kishioka and EP '322 were combined, one of ordinary skill in the art would not necessarily arrive at the claimed total thickness range and therefore, for at least this reason, it cannot be said that the PSA tape of Kishioka modified by EP '322 would be structurally equivalent to the present invention.

Further, even if Kishioka and EP '322 were combined, the PSA tape of Kishioka modified by EP '322 would not be compositionally equivalent to the claimed invention. Present claim 1 requires that the major monomer in the PSA layers is the same monomer. The Examiner states that Kishioka is relied on as teaching that both PSA layers are formed of the same monomer at paragraph [0065]. However, there is no disclosure in this portion of Kishioka (or any other portion) indicating that the PSA layers are formed of the same monomer. Therefore, Applicants submit that the Examiner is mistaken.

EP '322 also fails to teach or suggest that the major monomer in the PSA layers is the same monomer. Also, the disclosure of EP '322 at paragraph [0036] cannot be fairly interpreted as reading on a double-sided adhesive sheet having at least two PSA layers and no substrate,

since this portion of EP '322, specifically teaches "the layer of the pressure-sensitive adhesive is stuck to one surface or both surfaces of the base material and . . . can be used as a pressure sensitive adhesive sheet having the base material."

Thus, it cannot be said that the PSA tape of Kishioka modified by EP '322 would be compositionally equivalent to the claimed invention.

Since the PSA tape of Kishioka modified by EP '322 would not be structurally and compositionally equivalent to the claimed invention for the reasons set forth above, the properties recited in the claims are not necessarily present. Okabe does not remedy the deficiencies of Kishioka and EP '322.

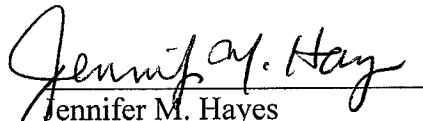
In view of the above, the Examiner has not set forth a reasonable basis for asserting that all elements of the claimed invention are taught or suggested and therefore has not made a *prima facie* showing of obviousness. Since the Examiner has not made a *prima facie* showing of obviousness, it is not necessary for Applicants to submit additional evidence in support of the patentability of the claimed invention.

Therefore, the present invention is patentable over the cited references whether taken alone or in combination. Accordingly, Applicants respectfully request withdrawal of the §103 obviousness rejections.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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